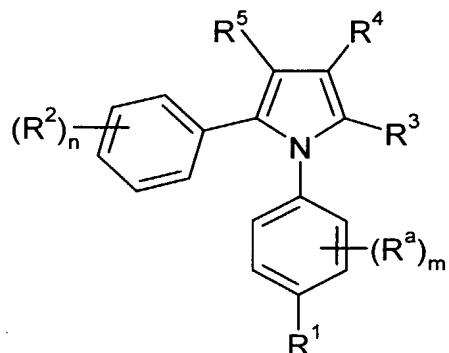


Claims

1. A compound of formula (I)



I

5 and pharmaceutically acceptable salts and solvates thereof, in which

R¹ represents a) a C₃₋₆alkoxy group substituted by one or more fluoro, b) a group of formula phenyl(CH₂)_pO- in which p is 1, 2 or 3 and the phenyl ring is optionally substituted by 1, 2 or 3 groups represented by Z, c) a group R⁶S(O)₂O or R⁶S(O)₂NH in which R⁶ represents a C₁₋₆alkyl group optionally substituted by one or more fluoro, or R⁶ represents phenyl or a heteroaryl group each of which is optionally substituted by 1, 2 or 3 groups represented by Z or d) a group of formula (R⁷)₃Si in which R⁷ represents a C₁₋₆alkyl group which may be the same or different;

R^a represents halo, a C₁₋₃alkyl group or a C₁₋₃alkoxy group

15 m is 0, 1, 2 or 3;

R² represents a C₁₋₃alkyl group, a C₁₋₃alkoxy group, hydroxy, nitro, cyano or halo
n is 0, 1, 2 or 3;

20 R³ represents H, a C₁₋₆alkyl group, a C₁₋₆alkoxy group or a C₁₋₆alkoxyC₁₋₆alkylene group which contains a maximum of 6 carbon atoms, each of which groups is optionally substituted by one or more fluoro or cyano;

R⁴ represents

a) a group X-Y-NR⁸R⁹

in which X is CO or SO₂,

5 Y is absent or represents NH optionally substituted by a C₁₋₃alkyl group;

and R⁸ and R⁹ independently represent :

a C₁₋₆alkyl group optionally substituted by 1, 2, or 3 groups represented by W;

a C₃₋₁₅cycloalkyl group optionally substituted by 1, 2, or 3 groups represented by W;

10 an optionally substituted (C₃₋₁₅cycloalkyl)C₁₋₃alkylene group optionally substituted by 1, 2, or 3 groups represented by W;

a group -(CH₂)_r(phenyl)_s in which r is 0, 1, 2, 3 or 4, s is 1 when r is 0 otherwise s is 1 or 2 and the phenyl groups are optionally independently substituted by one, two or three groups represented by Z;

15 a saturated 5 to 8 membered heterocyclic group containing one nitrogen and optionally one of the following : oxygen, sulphur or an additional nitrogen wherein the heterocyclic group is optionally substituted by one or more C₁₋₃alkyl groups, hydroxy or benzyl ;

a group - (CH₂)_tHet in which t is 0, 1, 2, 3 or 4, and the alkylene chain is optionally substituted by one or more C₁₋₃alkyl groups and Het represents an aromatic heterocycle

20 optionally substituted by one, two or three groups selected from a C₁₋₅alkyl group, a C₁₋₅alkoxy group or halo;

or R⁸ represents H and R⁹ is as defined above;

or R⁸ and R⁹ together with the nitrogen atom to which they are attached represent a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one

25 nitrogen and optionally one of the following : oxygen, sulphur or an additional nitrogen; wherein the heterocyclic group is optionally substituted by one or more C₁₋₃alkyl groups, hydroxy, fluoro or benzyl;

or b) oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, pyrrolyl,

30 pyrazolyl, imidazolyl, triazolyl, tetrazolyl, thienyl, furyl or oxazolinyl, each optionally substituted by 1, 2 or 3 groups Z;

a) a group X-Y-NR⁸R⁹

in which X is CO or SO₂,

5 Y is absent or represents NH optionally substituted by a C₁₋₃alkyl group;

and R⁸ and R⁹ independently represent :

a C₁₋₆alkyl group optionally substituted by 1, 2, or 3 groups represented by W;

a C₃₋₁₅cycloalkyl group optionally substituted by 1, 2, or 3 groups represented by W;

10 an optionally substituted (C₃₋₁₅cycloalkyl)C₁₋₃alkylene group optionally substituted by 1, 2, or 3 groups represented by W;

a group -(CH₂)_r(phenyl)_s in which r is 0, 1, 2, 3 or 4, s is 1 when r is 0 otherwise s is 1 or 2 and the phenyl groups are optionally independently substituted by one, two or three groups represented by Z;

15 a saturated 5 to 8 membered heterocyclic group containing one nitrogen and optionally one of the following : oxygen, sulphur or an additional nitrogen wherein the heterocyclic group is optionally substituted by one or more C₁₋₃alkyl groups, hydroxy or benzyl ;

a group - (CH₂)_tHet in which t is 0, 1, 2, 3 or 4, and the alkylene chain is optionally substituted by one or more C₁₋₃alkyl groups and Het represents an aromatic heterocycle

20 optionally substituted by one, two or three groups selected from a C₁₋₅alkyl group, a C₁₋₅alkoxy group or halo;

or R⁸ represents H and R⁹ is as defined above;

or R⁸ and R⁹ together with the nitrogen atom to which they are attached represent a saturated or partially unsaturated 5 to 8 membered heterocyclic group containing one

25 nitrogen and optionally one of the following : oxygen, sulphur or an additional nitrogen; wherein the heterocyclic group is optionally substituted by one or more C₁₋₃alkyl groups, hydroxy, fluoro or benzyl;

or b) oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, pyrrolyl,

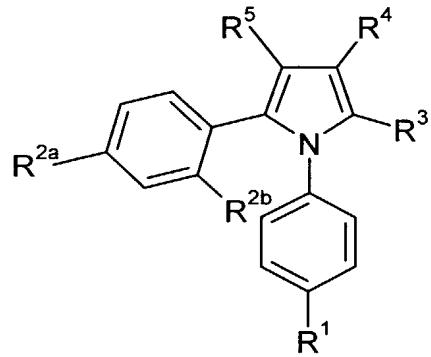
30 pyrazolyl, imidazolyl, triazolyl, tetrazolyl, thienyl, furyl or oxazolinyl, each optionally substituted by 1, 2 or 3 groups Z;

R⁵ represents H or a C₁₋₃alkyl group;

Z represents a C₁₋₃alkyl group, a C₁₋₃alkoxy group, hydroxy, halo, trifluoromethyl, trifluoromethylthio, difluoromethoxy, trifluoromethoxy, trifluoromethylsulphonyl, nitro, amino, mono or di C₁₋₃alkylamino, C₁₋₃alkylsulphonyl, C₁₋₃alkoxycarbonyl, carboxy, cyano, carbamoyl, mono or di C₁₋₃alkyl carbamoyl and acetyl; and

W represents hydroxy, fluoro, a C₁₋₃alkyl group, a C₁₋₃alkoxy group, amino, mono or di C₁₋₃alkylamino, or a heterocyclic amine selected from morpholinyl, pyrrolidinyl, piperdinyl or piperazinyl in which the heterocyclic amine is optionally substituted by a C₁₋₃alkyl group or hydroxyl.

2. A compound of formula (IA)



IA

15

in which R¹ is

a) a C₃₋₆alkoxy group substituted by one or more fluoro, b) a group of formula phenyl(CH₂)_pO- in which p is 1, 2 or 3 and the phenyl ring is optionally substituted by 1, 2 or 3 groups represented by Z, c) a group R⁶S(O)₂O or R⁶S(O)₂NH in which R⁶ represents a C₁₋₆alkyl group optionally substituted by one or more fluoro, or R⁶ represents phenyl or a heteroaryl group each of which is optionally substituted by 1, 2 or 3 groups represented by Z or d) a group of formula (R⁷)₃Si in which R⁷ represents a C₁₋₆alkyl group which may be the same or different;

R^{2a} represents chloro;

R^{2b} represents chloro;

R³ represents a C₁₋₃alkyl group;

R⁴ represents a group CONHNR⁸R⁹ in which NR⁸R⁹ represents piperidino; and

R⁵ represents H.

5 3. A compound selected from one or more of the following:

1-[4(benzyloxy)phenyl]-5-(2,4-dichlorophenyl)-2-methyl-N-piperidin-1-yl-1H-pyrrole-3-carboxamide;

4-{5-(2,4-dichlorophenyl)-2-methyl-3-[piperidin-1-ylamino]carbonyl}-1H-pyrrol-1-yl}phenyl trifluoromethanesulfonate;

10 5-(2,4-dichlorophenyl)-2-methyl-N-piperidin-1-yl-1-(4-(3,3,3-trifluoropropoxyphenyl))-1H-pyrrole-3-carboxamide ;

4-{5-(2,4-dichlorophenyl)-2-methyl-3-[(piperidin-1-ylamino)carbonyl]-1H-pyrrol-1-yl}phenyl butane-1-sulfonate;

15 5-(2,4-Dichloro-phenyl)-2-methyl-1-(4-trimethylsilanyl-phenyl)-1H-pyrrole-3-carboxylic acid piperidin-1-ylamide; and

4-{5-(2,4-dichlorophenyl)-2-methyl-3-[(piperidin-1-ylamino)carbonyl]-1H-pyrrol-1-yl}phenyl propane-1-sulfonate

as well as pharmaceutically acceptable salts thereof.

20 4. A compound of formula I as claimed in any previous claim for use as a medicament.

5. A pharmaceutical formulation comprising a compound of formula I according to any one of claims 1 to 3 and a pharmaceutically acceptable adjuvant, diluent or carrier.

25 6. Use of a compound of formula I according to any one of claims 1 to 3 in the preparation of a medicament for the treatment or prophylaxis of obesity, psychiatric disorders such as psychotic disorders, schizophrenia and bipolar disorders, anxiety, anxiety-depressive disorders, depression, cognitive disorders, memory disorders, obsessive-compulsive disorders, anorexia, bulimia, attention disorders, epilepsy, and related conditions, and neurological disorders such as dementia, neurological disorders, Parkinson's Disease, Huntington's Chorea and Alzheimer's Disease, immune, cardiovascular, reproductive and endocrine disorders, septic shock, diseases related to the

respiratory and gastrointestinal systems, and extended abuse, addiction and/or relapse indications.

7. A method of treating obesity, psychiatric disorders, psychotic disorders, schizophrenia and bipolar disorders, anxiety, anxi-depressive disorders, depression, cognitive disorders, memory disorders, obsessive-compulsive disorders, anorexia, bulimia, attention disorders, epilepsy, and related conditions, neurological disorders, neurological disorders ,

Parkinson's Disease, Huntington's Chorea and Alzheimer's Disease, immune, cardiovascular, reproductive and endocrine disorders, septic shock, diseases related to the

10 respiratory and gastrointestinal system, and extended abuse, addiction and/or relapse

indications, comprising administering a pharmacologically effective amount of a compound of formula I according to any one of claims 1 to 3 to a patient in need thereof.

8. A compound as defined any one of claims 1 to 3 for use in the treatment of obesity.